REMARKS

As the Examiner will note, claims 1 and 10 have been amended and, accordingly, claims 1 and 3–10 are presently under consideration in the present application.

The Rejections

Claims 1, 3, 6, 8, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ryu (US Patent No. 6,295,386) in view of Horobin (US Patent 7,106,477).

Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ryu (US Patent No. 6,295,386) in view of Horobin (US Patent 7,106,477) as applied to claim 3 above, and further in view of Sato (US Patent 5,245,440).

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ryu (US Patent No. 6,295,386) in view of Horobin (US Patent 7,106,477) as applied to claim 1 above, and in further view of Lodwick (US Patent 6,226,419).

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ryu (US Patent No. 6,295,386) in view of Horobin (US Patent 7,106,477) as applied to claim 8, and further in view of Fukuda (US Patent 6,624,876).

These rejections are respectfully traversed.

The Invention

The present invention is directed to a method and apparatus for the geometric calibrating of a feed through a scanner or transport scanner that is arranged for scanning a two-dimensional original and forming an electronic image for subsequent usage in an appropriate information handling system. The method and apparatus of the present invention analyzes the bitmap image resulting from the test original, derives differences from the intended values and calculates correction values for the respective parameters. Upon correction of these parameters, the

conversion process from the image on a page to the image in memory results in a true mapping, despite these differences.

The Prior Art and Argument

In rejecting the claims of the present application, the Examiner relies upon the Ryu reference to teach that the scanning module 2 is fixedly mounted on the supporting body 6 and specifically refers to column 4, line 30 to support his position. However, it should be recognized by the Examiner that the supporting body supports the scanning module and print head and moves by being driven by conveyor belt 4, which is powered by motor 1, along the guiding shaft 7. Thus, the entirety of the supporting body, scanning head and print head moves relative to the apparatus. This method and structural operation is clearly distinct from that of the present invention wherein the optical arrangement is fixedly mounted to the apparatus for forming an electronic image for subsequent usage in the information handling system. Please specifically refer to the language in both claims 1 and 10, in this regard. This difference between the present invention and the prior art is a consequence of the particular type of scanner under consideration in the Ryu reference, which is a shuttle-type of scanner, and accordingly is clearly distinct from the system under consideration in the present application.

The Examiner further asserts that in Figure 5B of the Ryu reference, the corrections are made before the document has finished scanning, thus teaching that the newly added limitation of the correction action is carried out in continuation of the scanning of the test original. It is believed that the Examiner's understanding is incorrect. Thus, Figure 5B clearly shows that correction takes place in Step S9, after the scanning of the general document, where, according to the present invention, correction (calibration) will take place before the scanning of any document. This leads to a one-time calibration providing an all-time correction of a parameter. This is to be distinguished from the teachings of the Ryu reference where correction takes place after each scan (in Step S9).

On page 6 of the Examiner's Office Action letter, the Examiner recognizes that the Ryu reference fails to teach utilizing a zoom factor in the transport direction, wherein the test original

contains a leading edge and comprises two sides of at least one marking in known parallel displacement and parallel with the leading edge, and fails to teach the method comprising a correction factor for the zoom factor based on the actual parallel displacement of the two sides in the electronic image and correction values for the mechanical device parameters. Accordingly, the Examiner turns to the Horobin reference to fill these deficiencies. However, the Horobin reference discloses that various programs running within a computer can perform certain basic image manipulation operations on image data. For instance, known software techniques can be performed on the image data to effect a magnification or reduction. However, in contrast to the teachings of the Horobin reference, the present invention provides that the zoom factor in the transport direction is a mechanical device parameter and, accordingly, correction is not established by an operation in software on the image data but is actually established by correction of the transport speed of the scanner. In this connection, the Examiner will note that claims 1 and 10 have been amended to more specifically emphasize this distinction over the prior art relied upon by the Examiner. Accordingly, even if, for sake of argument, it would be possible to modify the teachings of the Ryu patent with those of the Horobin patent, said combination would still not suggest the present invention.

Accordingly, in view of the above amendments and remarks, reconsideration of the rejections and allowance of all the claims in the present application are respectfully requested.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Joseph A. Kolasch, Registration No. 22463 at the telephone number of the undersigned below to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Director is hereby authorized in this, concurrent, and future replies to charge any fees required during the pendency of the above-identified application or credit any overpayment to Deposit Account No. 02-2448.

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Respectfully submitted,

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